WHAT IS CLAIMED IS:

1. A recording apparatus for encoding image data to record it onto a recording medium, comprising:

encoding means for encoding an inputted image signal by a plurality of different encoding methods to form a plurality of encoded image data;

sync data generating means for generating a plurality of sync data having different patterns respectively corresponding to said plurality of encoding methods;

control means for controlling said sync data generating means so as to output said sync data having the pattern corresponding to a selected one of said plurality of encoding methods; and

recording means for forming a plurality of sync blocks by adding said sync data corresponding to said selected encoding method to each of a predetermined amount of said encoded image data encoded by the selected encoding method and recording an encoded data stream constructed by said plurality of sync blocks onto the recording medium.

2. An apparatus according to claim 1, wherein said plurality of encoding methods include a high quality encoding method of encoding a video signal of high quality and a standard quality encoding method

of encoding a video signal of standard quality.

3. An apparatus according to claim 2, wherein said high quality encoding method is an MP@HL method or an MP@H-14 method in MPEG encoding system and said standard quality encoding method is a DV format method specified by the HD Digital VCR Council.

4. An apparatus according to claim 1, further comprising:

reproducing means for reproducing the encoded data stream from said recording medium;

decoding means for decoding by said plurality of encoding methods the encoded image data in the encoded data stream reproduced by said reproducing means;

sync data detecting means for detecting said sync data from a plurality of sync blocks reproduced by said reproducing means and discriminating the encoding method of said reproduced encoded image data on the basis of a result of said detection; and

control means for controlling the encoding method which is used in said decoding means on the basis of the encoding method discriminated by said sync data detecting means.

5. An apparatus according to claim 1, wherein

said recording medium is a magnetic tape.

6. A reproducing apparatus for reading out image data from a recording medium to reproduce it, comprising:

reproducing means for reproducing an encoded data stream from said recording medium;

decoding means for decoding by a plurality of different encoding methods encoded image data in the encoded data stream reproduced by said reproducing means;

sync data detecting means for detecting sync data from a plurality of sync blocks in the encoded data stream reproduced by said reproducing means and discriminating the encoding method of said reproduced encoded image data in accordance with a result of said detection; and

control means for controlling the encoding method which is used in said decoding means on the basis of the encoding method discriminated by said sync data detecting means.

7. An apparatus according to claim 6, wherein said plurality of encoding methods include a high quality encoding method of encoding a video signal of high quality and a standard quality encoding method of encoding a video signal of standard quality.

8. An apparatus according to claim 7, wherein said high quality encoding method is an MP@HL method or an MP@H-14 method in MPEG encoding stream and said standard quality encoding method is a DV format method specified by the HD Digital VCR Council.

9. An apparatus according to claim 6, wherein said recording medium is a magnetic tape.

10. A recording method of encoding image data to record it onto a recording medium, comprising:

an encoding step of encoding an inputted image signal by a plurality of different encoding methods to form a plurality of encoded image data;

a sync data generating step of generating a plurality of sync data having different patterns respectively corresponding to said plurality of encoding methods;

a control step of controlling so as to output said sync data having the pattern corresponding to a selected one of said plurality of encoding methods in said sync data generating step; and

a recording step of forming a plurality of sync blocks by adding said sync data corresponding to said selected encoding method to each of a predetermined amount of said encoded image data encoded by the selected encoding method and recording an encoded

data stream constructed by said plurality of sync blocks onto the recording medium.

11. A method according to claim 10, wherein said plurality of encoding methods include a high quality encoding method of encoding a video signal of high quality and a standard quality encoding method of encoding a video signal of standard quality.

12. A method according to claim 11, wherein said high quality encoding method is an MP@HL method or an MP@H-14 method in MPEG encoding system and said standard quality encoding method is a DV format method specified by the HD Digital VCR Council.

13. A method according to claim 10, wherein said recording medium is a magnetic tape.

14. A reproducing method of reading out image data from a recording medium to reproduce it, comprising:

a reproducing step of reproducing an encoded data stream from said recording medium;

a sync data detecting step of detecting sync data from a plurality of sync blocks in the encoded data stream reproduced in said reproducing step and discriminating an encoding method of encoded image

data of said reproduced encoded data stream in accordance with a result of said detection; and

a decoding step of decoding the encoded image data in the encoded data stream reproduced in said reproducing step, by the encoding method detected in said sync data detecting step.

15. A method according to claim 14, wherein the encoding methods include at least one of a high quality encoding method of encoding a video signal of high quality and a standard quality encoding method of encoding a video signal of standard quality.

16. A method according to claim 15, wherein said high quality encoding method is an MP@HL method or an MP@H-14 method in MPEG encoding system and said standard quality encoding method is a DV format method specified by the HD Digital VCR Council.

17. A method according to claim 14, wherein said recording medium is a magnetic tape.